

Claims

- [c1] 1. An ink cartridge, comprising:
a housing, having a substantially sealed space;
an ink pipe, connected to said housing, said ink pipe being fluidly linked to said sealed space; and
an ink storage unit, comprising a porous material, disposed inside said sealed space and substantially airtightly contacting with an inner wall of a bottom of said housing, said ink storage unit being above said ink pipe and having a gap with a top of said ink pipe.
- [c2] 2. The ink cartridge of claim 1, further comprising a filter disposed on said ink pipe.
- [c3] 3. The ink cartridge of claim 1, wherein said ink storage unit is adhered to the inner wall of the bottom of said housing.
- [c4] 4. The ink cartridge of claim 3, further comprising an adhesive layer for adhering said ink storage unit onto the inner wall of the bottom of said housing.
- [c5] 5. The ink cartridge of claim 1, wherein said ink storage unit is welded to the inner wall of the bottom of said housing.

- [c6] 6.The ink cartridge of claim 5, wherein said ink storage unit is welded to the inner wall of the bottom of said housing by heat sealing or ultrasound-welding.
- [c7] 7. The ink cartridge of claim 1, further comprising a sheet between said ink storage unit and the inner wall of the bottom of said housing, wherein said ink storage unit substantially airtightly contacts with said sheet and said sheet substantially airtightly contacts with the inner wall of the bottom of said housing.
- [c8] 8.The ink cartridge of claim 7, wherein said sheet is a plastic sheet.
- [c9] 9.The ink cartridge of claim 7, wherein said ink storage unit is adhered to said sheet and said sheet is adhered to the inner wall of the bottom of said housing.
- [c10] 10. The ink cartridge of claim 9, further comprising a first adhesive material between said ink storage unit and said sheet for adhering said ink storage unit onto said sheet, and a second adhesive material between said sheet and the inner wall of the bottom of said housing for adhering said sheet onto the inner wall of the bottom of said housing.
- [c11] 11. The ink cartridge of claim 7, wherein said ink storage

unit is welded to said sheet and said sheet is welded to the inner wall of the bottom of said housing.

[c12] 12.The ink cartridge of claim 11, wherein said ink storage unit is welded to said sheet by heat sealing or ultrasound welding, and said sheet is welded to the inner wall of the bottom of said housing by heat sealing or ultrasound welding.

[c13] 13. The ink cartridge of claim 1, wherein said ink pipe is extended into said sealed space.

[c14] 14.The ink cartridge of claim 1, wherein said porous material includes a sponge material or a fabric material.

[c15] 15.The ink cartridge of claim 1, wherein said ink storage unit has a cave adjacent to said ink pipe.

[c16] 16. The ink cartridge of claim 1, wherein before said ink storage unit is disposed inside said sealed space, a portion of said ink storage unit adjacent to said ink pipe is heat-pressed.

[c17] 17.An ink cartridge, comprising:
a housing, having a substantially sealed space;
an ink pipe, connected to said housing, said ink pipe being fluidly connected through said sealed space; and
an ink storage unit, comprising a porous material, dis-

posed inside said sealed space and substantially air-tightly contacting with an inner wall of the bottom of said housing, a portion of said ink storage unit adjacent to said ink pipe having a capillarity larger than other portion of said ink storage unit, said ink storage unit being above said ink pipe and having a gap with a top of said ink pipe.

[c18] 18.The ink cartridge of claim 17, wherein said ink storage unit has a uniform porous density before being treated with a heat pressing process and said portion of said ink storage unit adjacent to said ink pipe has a porous density larger than the other portion of said ink storage unit has after said heat pressing process.

[c19] 19. The ink cartridge of claim 17, wherein said porous material includes a sponge material or a fabric material.

[c20] 20.The ink cartridge of claim 19, wherein when said porous material is a sponge material, said ink storage unit is fabricated using a foaming process such that a porous density of a portion of said ink storage unit adjacent to said ink pipe is larger than other portion of said ink storage unit.

[c21] 21.The ink cartridge of claim 17, further comprising a belt inserted into said ink storage unit to tighten the

bottom of said ink storage unit such that a porosity density of a portion of said ink storage unit adjacent to said ink pipe larger than other portion of said ink storage unit.

- [c22] 22.The ink cartridge of claim 21, wherein the material of said belt includes a plastic material.
- [c23] 23.The ink cartridge of claim 17, further comprising a filter disposed on said ink pipe.
- [c24] 24.The ink cartridge of claim 17, wherein said ink storage unit is adhered to the inner wall of the bottom of said housing.
- [c25] 25. The ink cartridge of claim 24, further comprising an adhesive layer for adhering said ink storage unit onto the inner wall of the bottom of said housing.
- [c26] 26.The ink cartridge of claim 17, wherein said ink storage unit is welded to the inner wall of the bottom of said housing.
- [c27] 27.The ink cartridge of claim 26, wherein said ink storage unit is welded to the inner wall of the bottom of said housing by using heat sealing or ultrasound welding.
- [c28] 28. The ink cartridge of claim 17, further comprising a sheet between said ink storage unit and the inner wall of

the bottom of said housing, wherein said ink storage unit substantially airtightly contacts with said sheet and said sheet substantially airtightly contacts with the inner wall of the bottom of said housing.

[c29] 29. The ink cartridge of claim 28, wherein said sheet is a plastic sheet.

[c30] 30. The ink cartridge of claim 28, wherein said ink storage unit is adhered to said sheet and said sheet is adhered to the inner wall of the bottom of said housing.

[c31] 31. The ink cartridge of claim 30, further comprising a first adhesive layer between said ink storage unit and said sheet for adhering said ink storage unit onto said sheet, and a second adhesive layer between said sheet and the inner wall of the bottom of said housing for adhering said sheet onto the inner wall of the bottom of said housing.

[c32] 32. The ink cartridge of claim 28, wherein said ink storage unit is welded to said sheet and said sheet is welded to the inner wall of the bottom of said housing.

[c33] 33. The ink cartridge of claim 32, wherein said ink storage unit is welded to said sheet by heat sealing or ultrasound welding, and said sheet is welded to the inner wall of the bottom of said housing by heat sealing or ultra-

sound welding.

- [c34] 34. The ink cartridge of claim 17, wherein said ink pipe is extended into said sealed space.
- [c35] 35. The ink cartridge of claim 17, wherein said ink storage unit has a cave adjacent to said ink pipe.
- [c36] 36. The ink cartridge of claim 35, wherein a portion of said ink storage unit comprising said cave is local heat-pressed.
- [c37] 37. The ink cartridge of claim 17, wherein said portion of said ink storage unit adjacent to said ink pipe is heat-pressed.